

Please amend the claims as follows:

Claim 1 (Original): A thermoplastic elastomer composition molded article characterized in that a thermoplastic elastomer composition molded article is obtained by electron beam irradiation of a molded article mainly comprising a thermoplastic elastomer composition in which a crystalline polyethylenic resin (2) and a conjugated diene-based block copolymer (3) form a three-dimensional network structure in a matrix comprising an ethylene- α -olefin-based copolymer (1).

Claim 2 (Original): The thermoplastic elastomer composition molded article according to claim 1, wherein the conjugated diene-based block copolymer (3) comprises (a) a crystalline ethylenic polymer block and (b) a block having higher compatibility with the ethylene- α -olefin-based copolymer than compatibility with the crystalline polyethylenic resin.

Claim 3 (Currently Amended): The thermoplastic elastomer composition molded article according to claim 1 ~~or 2~~, wherein the conjugated diene-based block copolymer (3) has the crystalline ethylenic polymer blocks at both ends thereof.

Claim 4 (Currently Amended): The thermoplastic elastomer composition molded article according to ~~any one of claims 1 to 3~~ claim 1, wherein the conjugated diene-based block copolymer (3) is obtained by hydrogenating a conjugated diene-based block copolymer in which both end blocks thereof are the following block A and an intermediate block is the following block B, when the sum of the block A and the block B is taken as 100% by mass,

the block A is from 5 to 90% by mass and the block B is from 10 to 95% by mass, at least 80% of all double bonds contained in the conjugated diene-based block copolymer (3) before hydrogenation is saturated, and the number average molecular weight thereof is from 50,000 to 700,000:

A; a butadiene polymer block having a 1,2-vinyl bond content of less than 25 mol%
B; a conjugated diene polymer block and/or a vinyl aromatic-conjugated diene copolymer block which have a 1,2-vinyl bond content of 25 mol% or more.

Claim 5 (Currently Amended): The thermoplastic elastomer composition molded article according to ~~any one of claims 1 to 4~~ claim 1, wherein when the sum of the ethylene- α -olefin-based copolymer (1), the crystalline polyethylenic resin (2) and the conjugated diene-based block copolymer (3) is taken as 100% by mass, the ethylene- α -olefin-based copolymer (1) is from 10 to 94% by mass, the crystalline polyethylenic resin (2) is from 5 to 80% by mass, and the conjugated diene-based block copolymer (3) is from 1 to 80% by mass.

Claim 6 (Currently Amended): The thermoplastic elastomer composition molded article according to ~~any one of claims 1 to 5~~ claim 1, wherein when the sum of the ethylene- α -olefin-based copolymer (1), the crystalline polyethylenic resin (2) and the conjugated diene-based block copolymer (3) is taken as 100 parts by mass, a softening agent is contained in an amount of 200 parts by mass or less.

Claim 7 (Currently Amended): The thermoplastic elastomer composition molded article according to ~~any one of claims 1 to 6~~ claim 1, wherein when the sum of the

ethylene- α -olefin-based copolymer (1), the crystalline polyethylenic resin (2) and the conjugated diene-based block copolymer (3) is taken as 100 parts by mass, a crosslinking assistant is further added in an amount of 0.1 to 10 parts by mass to a thermoplastic elastomer composition (4).

Claim 8 (Currently Amended): The thermoplastic elastomer composition molded article according to ~~any one of claims 1 to 7~~ claim 1, wherein the cyclohexane insoluble matter after electron beam irradiation is from 50 to 100% by mass.

Claim 9 (Currently Amended): The thermoplastic elastomer composition molded article according to ~~any one of claims 1 to 8~~ claim 1, wherein the electron beam dose is from 1,000 to 2,000,000 (kV.kGy) as the product of the electron beam acceleration voltage (kV) and the irradiation dose (kGy).

Claim 10 (Currently Amended): The thermoplastic elastomer composition molded article according to ~~any one of claims 1 to 9~~ claim 1 which is at least one selected from the group consisting of a tube, a hose, a sheet, a film, a belt and a foam thereof.

Claim 11 (Original): The thermoplastic elastomer composition molded article according to claim 10 which is obtained by electron beam irradiation with rotation.

Claim 12 (Currently Amended): A processed good obtained by processing the thermoplastic elastomer composition molded article according to ~~any one of claims 1 to 11~~ claim 1.

Claim 13 (Currently Amended): ~~A process for producing the thermoplastic elastomer composition molded article accordint to any one of claims 1 to 11 comprising mixing an ethylene- α -olefin based copolymer (1), a crystalline polyethylenic resin (2) and a conjugated diene based block copolymer (3), dynamically heat treating the resulting mixture to obtain a thermoplastic elastomer composition, molding the thermoplastic elastomer composition, and then, subjecting the resulting molded article to electron beam irradiation~~ A processed good obtained by processing the thermoplastic elastomer composition molded article according to claim 2.

Claim 14 (Currently Amended): ~~The process for producing the thermoplastic elastomer composition molded article according to claim 13, wherein the molding is foam molding~~ A processed good obtained by processing the thermoplastic elastomer composition molded article according to claim 4.

Claim 15 (New): A process for producing the thermoplastic elastomer composition molded article according to claim 1 comprising mixing an ethylene- α -olefin-based copolymer (1), a crystalline polyethylenic resin (2) and a conjugated diene-based block copolymer (3), dynamically heat treating the resulting mixture to obtain a thermoplastic elastomer composition, molding the thermoplastic elastomer composition, and then, subjecting the resulting molded article to electron beam irradiation.

Claim 16 (New): A process for producing the thermoplastic elastomer composition molded article according to claim 2 comprising mixing an ethylene- α -olefin-based copolymer (1), a crystalline polyethylenic resin (2) and a conjugated diene-based block copolymer (3),

dynamically heat treating the resulting mixture to obtain a thermoplastic elastomer composition, molding the thermoplastic elastomer composition, and then, subjecting the resulting molded article to electron beam irradiation.

Claim 17 (New): A process for producing the thermoplastic elastomer composition molded article according to claim 4 comprising mixing an ethylene- α -olefin-based copolymer (1), a crystalline polyethylenic resin (2) and a conjugated diene-based block copolymer (3), dynamically heat treating the resulting mixture to obtain a thermoplastic elastomer composition, molding the thermoplastic elastomer composition, and then, subjecting the resulting molded article to electron beam irradiation.

Claim 18 (New): The process for producing the thermoplastic elastomer composition molded article according to claim 15, wherein the molding is foam molding.

Claim 19 (New): The process for producing the thermoplastic elastomer composition molded article according to claim 16, wherein the molding is foam molding.

Claim 20 (New): The process for producing the thermoplastic elastomer composition molded article according to claim 17, wherein the molding is foam molding.